

CLAIMS

1) The invention consists of an electroacoustical transducer capable of generating an acoustic radiation according to a modulating current, by compression and expansion of the air mass situated between:

- 5 a mobile membrane flexibly supported by a system of suspension on a rigid chassis, and
- a rigid fixed surface herein referred to as anvil, which is also equally fixed, to the same chassis.

The characteristic of the arrangement of the aforementioned membrane and anvil
10 is that they are placed opposite one another and that, consequently, the direction of the resultant acoustic wave is perpendicular to the displacement of the membrane.

- 2) The device, according to claim 1, characterized by its component arrangement enables one to obtain an omnidirectional acoustic transducer (figures 5 to 8), that
15 is to say generating a sound radiation through 360° in the plane which is perpendicular to the direction of the displacement of the membrane.

- 3) The device, according to claims 1 and 2, characterized by the possibility of superimposition, on an axis parallel to the displacement of the moving membrane, of two or more omnidirectional transducers (figure 9) each
20 responsible for the reproduction of a determined range of frequencies.

- 4) The device according to claim 1 and characterized by baffles (1112 and 1212) rigid or otherwise, placed perpendicular to the membrane and the anvil, of which the function is to physically limit the air mass contained between the membrane and the anvil; this arrangement allows for a precise directivity of the
25 resultant acoustic radiation to be achieved, according to the shape, geometry, and dimensions of the membrane, anvil, baffles and chassis depending on the desired range of frequencies to be reproduced.

- 5) A device, according to the claim 4 and characterized by the fact that the baffles (1112 and 1212) can be an integral part of the chassis (113 and 123).

- 30 6) A device according to claims 1,2 and 4 and characterized by the fact that the device may incorporate a "horn" improves it sound output by an enhanced acoustic coupling between the solid membrane and the ambient environment (air).

- 7) A device according to claims 1, 2 and 4, and characterized by the fact that it may incorporate, as a driver for the membrane, an electromagnetic, piezoelectric, electrostatic or other driver device, as well as all methods of control and driving of all mobile parts by analog or digital method.
- 5 8) A device, according to claims 1, 2 and 4, and characterized by the possibility of being may be utilized in other fluid media, gas or liquid other than air.
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